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(54) NEGATIVE ELECTRODE FOR NONAQUEOUS ELECTROLYTE SECONDARY BATTERY, MANUFACTURE THEREOF AND NONAQUEOUS ELECTROLYTE SECONDARY BATTERY

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a negative electrode material which hardly causes fining, even if expansion and contraction, in conjunction with storage and release of lithium are repeated by using composite particles prepared by covering the surfaces of Sn-containing active material particles, comprising a lithium storing phase and a lithium non-storing phase with a conductive material.

SOLUTION: In negative electrode active material particles, a lithium-storing phase and a lithium non-storing phase are present at the same time, and the expansion and contraction of the entire active material are relaxed. The negative electrode active material is immersed in an organic solvent with a conductive high-polymer material dissolved and thereafter dried, and part or all of the surfaces of the negative electrode active material particles are covered with the conductive material. The lithium storing phase in the active material particles contains Sn and one or more kinds of other elements as constituent elements. The other element is selected from among a group 2 element, transition element, group I2 element, group I3 element and group I4 element, and the element and Sn form a solid solution or an intermetallic compound. The lithium non-storing phase may be any of elements which do not store lithium, a solid solution, or an intermetallic compound.

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